No. XII.—THE FOOD OF THE SHIKRA (ASTUR BADIUS).

On the morning of 6th February a Shikra caught a little Indian Kingfisher under a babul tree 4 or 5 yards from me. The kingfisher gave the shikra a useful peck but the latter was just attacking the former's throat when I ran up and the shikra let go. The kingfisher flew off apparently unharmed. Somehow one does not connect a kingfisher with the idea of game for a small hawk. I felt rather virtuous at having saved the kingfisher from its cruel enemy but I smiled afterwards at my hypocrisy as I was on my way to my stand for a duck shoot.

I see the *Field* has been giving instances of a variety bag with one shot. I got a quail and a field rat on the 3rd with one shot which seems unusual.

E. O'BRIEN, LT.-Col.

Bhuj, Cutch, 8th February 1922.

[The usual food of the shikra appears to be lizards, but it is not averse to seizing small birds, rats or mice, or even large insects.—Eds.]

No. XIII.—THE MARBLED DUCK (MARMARONETTA ANGUSTI-ROSTRIS) IN THE PUNJAB.

From what is said in Stuart Baker's Game Birds of India, Burma and Ceylon (Vol. I, page 242) regarding the distribution of the Marbled Duck I gather that records of its appearance in the Punjab may be of interest.

I have shot single specimens of this bird in the Punjab on four occasions:-

 $\left. \begin{array}{c} 15 th \ \text{November 1908} \\ \\ 28 th \ \text{February 1909} \end{array} \right\} \\ \text{Ferozepore District.}$

20th November 1918

Shelum District (on the salt lake at Kallar Kahar in the Salt Range, altitude 2,100 feet.)

H. W. WAITE, Indian Police.

JHELUM, PUNJAB, 24th March 1922.

No. XIV.—THE OCCURRENCE, HABITS AND BREEDING OF THE SPOTTED SANDGROUSE (*PTEROCLURUS SENEGALLUS*) IN THE BAHAWALPUR STATE, PUNJAB.

The spotted Sandgrouse (*Pteroclurus senegallus*, Blanford) is, within my experience at any rate, sufficiently uncommon in the Punjab to justify my writing to you to record the fact that Col. O'Brien and I have recently shot it in this State.

On one occasion these sandgrouse (the only kind of sandgrouse about) were from 200 to 300 in number. The weather here has been rather unusual (cool and rainy) which perhaps brings these birds.

After writing the above I have had further opportunities of observing these birds and I am now able to give a definite assurance that this species breeds here also.

On the 7th current I was driving in a car through the desert at a place about 10 miles West of Ahmadpur East with a companion when I noticed a bird on the ground that seemed worth investigation. It was late in the afternoon, but we got out and looked. The bird proved to be a Sandgrouse, and, on approaching nearer, we saw that there were two. Then a second pair came in view and, by the time I looked at the first pair again, I found there were with them a pair of young ones about one-third their size, but well able to move on the ground. This was distinctly interesting, both because the date struck us as early for any Sandgrouse to be breeding and because we had both heard a note which assured us that this was senegallus, and were near enough to identify the colouring. We have both shot the spotted Sandgrouse recently and his note cannot be confused with that of the black-bellied Pterocles arenarius or the common Pteroclurus exustus.

The old birds with their young ran on ahead of us, and the tactics of the old ones were perfect. There was only one tiny bit of cover in the near neighbourhood in this waste of hard wind-swept clay, viz., a thin strip of dwarfish bush not more than a few inches high. In this the parents left their babies, while they themselves ran on ahead and went through the most approved decoy antics. We were not deceived however and proceeded to hunt for the nestlings, which were soon found squatting very close with heads drawn in and looking exactly like the bits of dry came! dung which are to be found about. My friend stalked one little bird and caught it successfully in his hand, the infant not moving till it was secured. The other, either alarmed at the fate of its companion or because more advanced (there was a distinct difference in size between the two), got up as I approached and ran off, flapping its immature wings, but I secured it. There seemed a very good chance of our being able to bring the chicks up, so we determined to take them back with us. This we did, the old birds flying round us most persistently till the last.



These nestlings were densely covered with yellowish down of a most completely protective colour. My photo shows the two side by side on a brick of regulation size.

The day but one after, I went out and spent an hour and a half quartering the ground in the neighbourhood with a rope. I saw a flock of 14 of the same

species, but got no nests or eggs. Numerous smooth hollows in the ground hereabouts however were filled with convoluted droppings which I suspect to be those of this species. Their number seems to suggest that the birds may sleep, as the Common European Partrige is said to do, in parties heads outwards, tails inwards, for purposes of protection, but it is a point which I have not verified by personal observation. The nestlings were alive on the 10th April, and the man in charge of them, who has much to do with the care of domestic fowls, reported that they were doing satisfactorily, though he had to feed them by hand still. I then had to go away for several days and was distressed to find on my return that both had died. The precocity of the Sandgrouse and their congeners among "nidifugous" birds is well-known. I should imagine that these youngsters were a week to ten days out of the egg when we found them.

The place where our find was made is not less than 30 miles from the River Indus, which with the jheels and ponds near it, is where our winter species drink. This bears out what Stuart Baker has to say about the distance these birds breed away from water. How then are the young birds given the liquid they require? A recent book of a type more scientific than it affects to be, viz., Pycraft's "History of Birds," says that the parent Sandgrouse, after slaking their own thirst at distant water, wallow till their under-plumage is laden with water, which they are able to convey, after the long return flight, to their young. Regurgitation, as with other kinds of birds, is perhaps a means of providing liquid or food of a semi-liquid kind.

A last point for notice is that the chicks were able to give the call-note of the species,—which may be rendered "whit-hu", perfectly. It is not difficult for a human to mimic, and I could get the youngsters to answer me when I tried it on them. Stuart Baker gives the Sindi name as Gutu, which is no doubt onomatopoeic like the Vernacular names for the commoner kinds of Sandgrouse

that I am familiar with in the Punjab.

Dera Nawab N. W. R.,

R. C. BOLSTER.

BAHAWALPUR STATE, 19th April 1922.

No. XV.—CROCODILE SHOOTING AND SNARING.

(With a plate.)

Mr. Shortt's good article was enjoyable reading.

My own shooting has been confined entirely to Sind, and to crocodile in jheels, "dunds" we call them here. A year ago I spent a week at a group of "dunds" in the neighbourhood, they were full of mugger, but the beasts difficult to shoot as the shores in most places were open maidan, with no cover excepting where too thick to penetrate. All the shooting had to be done on the same side, as the crocodile stalked was lying, as the water was too wide to fire across. As a result of some years' experience at this sort of shikar, I have formed certain theories, and my methods of stalking are based on these.

The occasion here related was the first shoot of sufficient length I had had,

to give my methods a really good test.
I may first of all say that I have never been successful in approaching mugger over open ground unless the wind was in my favour, excepting for odd animals sound asleep. I have frequently noticed that sheep, goats and cattle, however much noise they made when feeding naturally, and not galloping about in fright, never sent mugger into the water. I found that by getting on to my hands and knees at a long distance from the mugger, and appoaching